Porcine Respiratory Coronavirus, ISU-1

Catalog No. NR-43286
Derived from BEI Resources NR-448

For research use only. Not for human use.

Contributor:
Linda J. Saif, Ph.D., Food Animal Health Research Program, Ohio Agricultural Research and Development Center, Department of Veterinary Preventive Medicine, College of Veterinary Medicine, The Ohio State University, Wooster, OH

Manufacturer:
BEI Resources

Product Description:
Virus Classification: Coronaviridae, Coronavirus, Alphacoronavirus
Species: Porcine Respiratory Coronavirus (PRCV)
Strain: ISU-1
Original Source: PRCV, ISU-1 was isolated by Howard Hill in Indiana in 1990 from a nasal swab of a pig with mild or subclinical respiratory infection. It was passaged eight times in swine testicular (ST) cells and plaque purified twice. At least seven additional passages and a third round of plaque purification were performed prior to deposit at BEI Resources.

Comments: PRCV was first isolated from pigs in Belgium that were seropositive for porcine transmissible gastroenteritis virus (TGEV) despite lacking any history of clinical TGE, and was subsequently also isolated from pig herds in the United States. PRCV is not an officially recognized alphacoronavirus species. It is actually a naturally occurring deletion mutant of TGEV (now known as alphasporavirus 1), with altered respiratory tropism and reduced virulence. The complete genome of the ISU-1 strain has been sequenced (GenBank: DQ811787).

NR-43286 was derived from BEI Resources NR-448 by removal of contaminating gram-negative bacteria and mycoplasma. This process required six additional passages in ST cells (ATCC® CRL-1746™). NR-448 is no longer available.

Material Provided:
Each vial contains approximately 1 mL of clarified cell lysate and supernatant from Sus scrofa testicular fibroblasts infected with porcine respiratory coronavirus, ISU-1.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:
NR-43286 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

Growth Conditions:
Host: ST cells (ATCC® CRL-1746™)
Growth Medium: Eagle’s Minimum Essential Medium with Earle’s Balanced Salt Solution, non-essential amino acids, 2 mM L-glutamine, 1 mM sodium pyruvate, and 1500 mg/L sodium bicarbonate
Infection: Cells should be 85% to 100% confluent
Incubation: 2 to 7 days at 37°C and 5% CO2

Cytopathic Effect: Rounding, clumping, and detachment

Biosafety Level: 2

Disclaimers:
You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.
Use Restrictions:
This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

References:
6. ICTV Taxonomy History for Alphacoronavirus 1

ATCC® is a trademark of the American Type Culture Collection.